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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/560,121	04/28/2000	Todd A. Merritt	303.626US1	3391

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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

WELLS, KENNETH B

ART UNIT PAPER NUMBER

2816

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/560,121

Applicant(s)

MERRITT, TODD A.

Examiner

Kenneth B. Wells

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The amendment filed on 5/15/03, previously unentered, has now been entered in the RCE application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-5, 7, 8, 10, 12, 14, 15, 17, 19-26 and 35-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Merritt, USP 5,828,095.

Note Fig. 9, where the recited "plural phase generators" are formed by the elements within circuit 1020; the "first and second preboot capacitors" are elements 1380 and 1410; the "first and second main pump capacitors" are elements 1480 and 1500; the "first and second pre-boot precharge capacitors" are elements 1640 and 1660; and the "first and second gating devices" are any two of the switching FETs in the figure. The primary and secondary phase generators of claim 5 are formed by any combination of circuits 1100, 1020 and the remaining gates to the left of capacitors 1640 and 1660 in the figure. The "sharing transistors" of claim 41 are FETs 1920 and 1940.

As to the new limitation that the output of each of the pre-boot precharge capacitors is coupled to the output of the first

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and second pre-boot capacitors, respectively, this does not distinguish over Merritt because, in Merritt, the output of each of the pre-boot precharge capacitors 1640 and 1660 is indeed coupled to the output of the first and second pre-boot capacitors (via intervening elements). Note that *all points* in a circuit are connected together (at least physically, and most electrically).

As to the new limitation that the output is a pumped voltage higher than V_{cc} , this is seen to be inherent in Merritt (i.e., it is the basis idea behind any charge pump that has the purpose of generating a (positive) pumped voltage.

4. Claims 3, 5, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Cha.

Note Fig. 2, where the recited "plural phase generators" are the elements 16 and INV9 ; the "first and second preboot capacitors" are elements C1 and C3; the "first and second main pump capacitors" are elements C2 and C4; and the "first and second gating devices" are any two of the switching FETs in the figure.

As to the new limitation that the output of each of the pre-boot precharge capacitors is coupled to the output of the first

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and second pre-boot capacitors, respectively, this does not distinguish over Cha because, in Cha, the output of each of the pre-boot precharge capacitors 1640 and 1660 is indeed coupled to the output of the first and second pre-boot capacitors (via intervening elements). Note that *all points* in a circuit are connected together (at least physically, and most electrically).

As to the new limitation that the output is a pumped voltage higher than Vcc, this is seen to be inherent in Cha (i.e., it is the basis idea behind any charge pump that has the purpose of generating a (positive) pumped voltage.

5. Claims 6, 9, 11, 13, 16, 18 and 27-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt.

The claims reciting the specific power supply level (e.g., 1 to 2.5 volts) or delay time (e.g., 10 to 30 nanoseconds) are deemed to be obvious design expedients to those having ordinary skill in the art, since the skilled artisan will easily recognize that a supply voltage can be set to any desired value, as can the amount of delay of a delay element, without any unexpected results.

Claims 27-34 are also deemed to be obvious modifications to Merritt because those skilled in the art will also recognize that

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the charge pump of Merritt is for use in *any IC environment* where a pumped voltage above the available supply voltage is required or desired.

6. Applicant's arguments filed on 5/15/03 have been fully considered but they are not persuasive.

The argument that "Applicant considers additional elements and limitations of claims 1-5 and 19-26 to further distinguish over the cited references" is not persuasive because applicant has chosen not to identify such additional elements and limitations at this time. Thus the examiner is not clear on what these differences may or may not be. The same is true for claims 35-41, where applicant has "reserved the right" to present arguments at a later date, rather than set forth such arguments in the 5/15/03 response.

The next argument is that "None of [the] references disclose [sic] *inter alia* outputting a first and second main pump charges [sic] to a Vccp through first and second gating devices during the first and second phases". This argument is not persuasive because, as noted in the previous office actions, the term "main" cannot be relied upon to distinguish over the applied prior art

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because nothing in the claims reflects what makes them "main" pump charges, as opposed to some other type of charges.

Finally, the argument that the examiner should provide a reference or affidavit to support the rejection of claims 6, 9, 11, 13, 16, 18 and 27-34 is again not a proper response to the obviousness-type rejection of these claims, for the reasons provided in the previous office action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is 703-308-4809. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at 703-308-4876. The fax phone numbers for TC2800 are 703-872-9318 (before final) and 703-872-9319 (after final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.


Kenneth B. Wells
Primary Examiner
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August 8, 2003